Richmond Chang
changrichmond@gmail.com
linkedin.com/in/changrichmond

SOFTWARE ENGINEER

EXPERIENCE

Sony Interactive Entertainment
Software Engineer II   *Mar 2018 - Present*
- Worked on next-gen initiatives to support Sony and partners - AWS hosted Spring application with React front end
  - *Learned React on the job* - Wrote custom components with QOL features and complex business validation to enhance user productivity; worked with Redux and Jest; worked on image picker modal; rendered data with pagination/sorting/filtering
  - Used OAuth and gRPC to integrate with internal services to develop a public facing API, added a database to store Okta users and manage roles for authorization, utilized AWS Elasticsearch data store for real time suggestions
- Wrote a service to replace existing voucher code generation - Implemented new business rules, improved performance, added encryption at rest, developed a solution to increase batch code sample space without breaking downstream systems
  - Devised a migration plan for 4.2 billion legacy voucher codes with minimal application down time
  - Optimized voucher code import job to run in around several months to a little over a week
- Wrote a service to securely deliver voucher codes to partners; scaled up from 900K codes to support new limit of 10M
- Implement a module to simplify secret management that is used across multiple Spring applications
- Worked on a Spring/Hibernate application for partners to order vouchers through AWS S3 and SFTP
  - Used AWS SES to email partners on order approval and delivery, add pre-signed AWS S3 urls to download voucher codes

GumGum
Software Engineer   *Sept 2016 - Feb 2018*
- Visual Intelligence (VI) – Service using computer vision to detect brand value in social media images
  - *Big data pipeline* - ingests ~15 million social media posts daily through AWS Kinesis, parses and processes the data in Apache Storm, and stores the data in Amazon S3 and Elasticsearch
  - *Java/Spring web application* – hosted on AWS EC2, allows users to analyze brand engagement on social media
- Developed a data pipeline to ingest ad publisher images into VI, upgraded Java consumer of GNIP (Twitter data) stream to 2.0
- Rewrote image/analytics endpoints of the VI API to use a common query filter so user searches carried across pages
- Scripted in Python to generate reports (top keywords, Sports Sponsorship analysis), provide data to other teams, update data in the Elasticsearch database, and interact with third-party services' APIs

UCI Office of Information Technology
Programmer Analyst II, Student Financials   *Jul 2015 – Sept 2016*
- Migrated customers and financial data to Ellucian student system. Used T-SQL/Oracle to filter/cleanse data.
- Modified two Java web apps (Tomcat Servlet/Jasper Report, Spring/Hibernate) to support variable rate institutional loans
- Scripted Bash process to securely transfer and archive reports from Bank of America to school departments

Student Programmer   *Dec 2012 – Jun 2015*
- Developed a Java Spring/Hibernate web application to allow staff to manage lab fees for academic quarters
- Wrote SQL and Bash scripts to migrate and convert 100+ tables from the old financial system

Web Data Extraction - Freelance   *Nov 2012 – Jan 2013, Dec 2014*
- Developed C# programs to extract property tax data on websites into structured reports for clients
- Optimized C# URL to TLD conversion program from a run time of 5-7 minutes to 6-10 seconds

PROJECTS

Ludum Dare 29, 30, 33   *(48-hour themed competition where games/assets are developed in solo)*
- Boat Simulator (Apr. 2014, Java, LibGDX) - Sandbox with a boat in buoyant water
- Fairy Catcher (Aug. 2014, Java, LibGDX) - Arcade game where player switches planes to catch fairies
- Iron Cog Goblin (Aug. 2015, C#, Unity 2D) - Stealth 2D platformer where goblin collects treasure

Advanced Database System Course   *Apr 2015 – Jun 2015*
- Designed and implemented major components of a relational database system in C++
- Read/write records to disk, CRUD operations on records, indexing (top-down B+ tree), nulls and variable length strings

Advanced Computer Graphics Course - Ray Tracer   *Apr 2013 – Jun 2013*
- Developed a ray tracer in C++ from skeleton code; implemented intersection, ray casting, lighting, shadows, reflection, anti-aliasing, photon mapping and blur to generate realistic images

EDUCATION

University of California, Irvine *(Cum Laude)*   *June 2015*
- B.S., Computer Science; B.S., Software Engineering   GPA: 3.8

SKILLS

- **Languages:** Java, C#/LINQ, C++, Python, Javascript/React; TSQL/Oracle, Elasticsearch; Bash, HTML/CSS/JS
- **Tools:** Visual Studio, Eclipse, IntelIJ, Unity; Git, SVN; UNIX; Spring/Hibernate, Apache Storm; Selenium; XPath